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Author information

Yu-Chin Her[1,2], Jorik Vergauwen[1], Dimitri Mortelmans[1]

[1]Centre for Population, Family and Health, University of Antwerp, Belgium

[2]Department of Sociology, University of Copenhagen, Denmark

Yu-Chin Her ⬙ https://orcid.org/0000-0003-3241-7217

Jorik Vergauwen ⬙ https://orcid.org/0000-0003-4305-7149

Dimitri Mortelmans ⬙ https://orcid.org/0000-0003-3285-8223

Corresponding author: Yu-Chin Her, Department of Sociology, University of Copenhagen, Øster Farimagsgade 5, 1353 København, Denmark. Telephone: +4535322023

Email: ych@soc.ku.dk

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Abstract

Previous research has highlighted the impact of social network partners on individuals' attitudes and behaviors and the significant role that siblings often play in providing lifelong support, especially in times of important life events. However, a few studies have examined the intragenerational transmission of divorce risks. Given the increasing prevalence of unmarried cohabitation, however, no study has yet unraveled the link between siblings' relationship breakups in general, and neither has the impact of siblings' partnership type and demographic characteristics been investigated. This study aims to understand cross-sibling influence on relationship breakup, including both divorce and separation, and whether sibling similarity in partnership type and demographic traits explain the social influence processes. We used longitudinal data from the Belgian population register and family fixed-effects event history analysis. Partnered individuals ($N = 67,113$) and their siblings were followed between 1998 and 2018. The results revealed that an individual's likelihood of experiencing a union dissolution was lower following that of a sibling. This was particularly pronounced among siblings belonging to the same partnership type (both married or both cohabiting) and close-in-age siblings. For instance, after a sibling's separation from a cohabitation, cohabiters were at lower odds of dissolving their union than the married, especially when they had a small age gap. The findings indicate that accounting for the time-constant factors originating from the family context, a sibling's breakup might have a protective impact on one's own relationship status and duration. The study contributes to the growing knowledge on intragenerational transmission of partnership dissolution.

Keywords: partnership dissolution, siblings, social influence, fixed effects, event history

Sibling Transmission of Relationship Breakup: Does Partnership Type Matter?

In many Western societies, divorce rates remain unprecedentedly high (Boertien, 2020). Belgium has consistently maintained a divorce rate exceeding the European average for the past 20 years (Eurostat, 2022), with up to 30% of married couples ending up getting a divorce (Snoeckx et al., 2008; Statbel, 2023). Over the past decade, the country has observed on average 23,000 dissolving marriages per year, with relationship duration being approximately 15 years (Statbel, 2023). However, recent figures show a decrease in the number of divorces (Statbel, 2023), likely due to the declining marriage rate (Boertien, 2020; Van den Berg & Mortelmans, 2018). Recent birth cohorts have demonstrated a higher incidence of longstanding unmarried cohabitation (hereafter "cohabitation"), causing the prevalence of marriage to decline (Gassen, 2023; Hiekel et al., 2014; Kiernan, 2004). As a result, divorce studies have shifted towards relationship breakups instead of ending marriages and have focused on all couples who break up after having lived together for a while (Mortelmans, 2020). Studies revealed that the dissolution rate of cohabitation in Belgium exceeds that of marriage (Pasteels & Mortelmans, 2017; Van den Berg & Mortelmans, 2018).

Research has suggested that social network partners may influence individuals' behaviors and values (Bandura, 1977; Bernardi, 2003). Given the crucial role siblings often play in providing social and emotional support and that sibling relationships typically span a lifetime, siblings have been a central example in this body of literature (Bernardi & Klärner, 2014; Cicirelli, 1995; Connidis, 1992). Next to the insights on intergenerational transmission of divorce risks through parental divorce (e.g., Wolfinger, 2011; Wolfinger, 2016), researchers have recently drawn attention to the influence of siblings, suggesting considerable sibling similarity in divorce risks (Buyukkececi & Leopold, 2020; de Vuijst et al., 2017). Previous studies, however, were limited to examining the transmission of dissolving marriages rather than partnership dissolution in general. In the present study, we

focus on sibling transmission of relationship breakup and uncover if similarity in partnership type matters. Moreover, we aim to investigate to what extent siblings' demographic similarities may moderate this.

The analysis draws on rich and longitudinal data from the Belgian population register. It employs a within-family approach to mitigate the impact of confounding factors and similarities in siblings' backgrounds. To our knowledge, this research is the first to examine sibling transmission of relationship breakup in general and to unravel the role of union type. It is also one of the first studies to utilize family fixed-effects modeling to assess cross-sibling effects. The present study contributes to the growing knowledge of social network effects by revealing the mechanisms through which sibling transmission of life course events takes place.

Explaining the Connection between Siblings' Relationship Breakups

During childhood and adolescence, siblings play a central role in each other's lives due to shared environments and contact regularity (Cicirelli, 1995; McHale et al., 2012; Voorpostel, 2007). In (young) adulthood, after moving away from the parental nest, most siblings' communication is more voluntary and occurs via family gatherings, phone calls, and social media (Hamwey et al., 2019). Hand in hand with less sibling contact, conflicts between siblings decrease, contributing to a more stable and close relationship (Jensen et al., 2018). That said, sibling relationships also vary depending on the life course stages of adulthood. For instance, starting a new relationship or welcoming a new baby might decrease sibling contact, whereas experiencing a relationship dissolution can increase sibling exchange and emotional closeness (Connidis, 1992; White, 2001). Either way, siblings likely have a special bond, and siblingship may form the longest-lasting social relationship, being supportive through various life experiences (Conger & Little, 2010; Jensen et al., 2020).

Due to their close bonds, siblings may mutually influence each other across a broad spectrum of behaviors and life choices, such as academic performance (van Eijck, 1997), substance use (Whiteman et al., 2014), sexual intercourse (Haurin & Mott, 1990), parental home leaving (Her et al., 2022), and union formation and dissolution (Buyukkececi & Leopold, 2020; de Vuijst et al., 2017). The social network approach has often been used to explain between-sibling (i.e., intragenerational) transmissions, including three relevant mechanisms: *social contagion*, *social learning*, and *social support* (Bandura, 1977; Bernardi, 2003). The theoretical framework suggests that individuals observe, learn from, and are influenced by their social networks. Since siblings often grow up together, they are salient behavioral examples and role models. Even if adult siblings no longer live together, they can still learn from and imitate each other's behaviors (Cassinat & Jensen, 2020; Hamwey et al., 2019). This may be especially true for those who have siblings whose union is dissolved. Previously cohabiting or married people will likely turn to friends, siblings, or parents for emotional support following their relationship breakup (Kołodziej-Zaleska & Przybyła-Basista, 2016; White, 2001). This, in turn, may become an occasion for contagion and modeling processes.

Despite the declining prevalence of marriage and the increasing popularity of unmarried cohabitation (Gassen, 2023; Mortelmans, 2020), in tandem with a higher dissolution rate in cohabitation (Pasteels & Mortelmans, 2017), research has only demonstrated similarities between siblings' marital disruptions (Buyukkececi & Leopold, 2020; de Vuijst et al., 2017). Particularly, using a between-family approach and focusing on individuals with only *one* sibling, de Vuijst et al. (2017) found that an individual's divorce risk increases following a sibling's divorce among the Dutch population, and Buyukkececi and Leopold (2020) hinted a similar effect using a large panel study in Germany. The latter's effect was attenuated by controlling for confounding factors. Yet, the two studies did not

include all the possible sibling pairs, and as such the theoretical link between siblings' experience of ending a cohabiting union is unclear. Based on the literature and the previous empirical studies, we expect that siblings' relationship breakups in general are also positively correlated.

Siblings' Partnership Type and Demographic Similarities

Social identification theory, a theory in social psychology, was first introduced by Tajfel (1978) and further developed by Tajfel and Turner (1979). It posits that individuals identify with various social categories, such as age groups, religious groups, and professional groups. Through social categorization and group evaluation of values and attitudes, the groups individuals identify with become their *in-groups*, whereas the ones they do not feel belonging to are the *out-groups*. People often prefer their in-groups, exhibiting positive attitudes and providing support or resources to their fellow group members (in-group favoritism), while viewing members of other groups as less favorable or inferior to one's group (out-group derogation). The social identification theory has been used to explain the social influence processes (Abrams & Hogg, 1990; Hornsey, 2008). Because people favor uncertainty reduction and conformity (Cialdini & Goldstein, 2004), they tend to befriend their in-groups and embody their attitudes, behaviors, and values more. They are also inclined to receive pressure to comply with their in-groups. Concerning the association between siblings' union dissolutions, there may be an in-group effect in terms of partnership type, in which partnered individuals regard their siblings as belonging to the same partnership type as their in-groups while the others are the out-groups.

Cross-sibling influence on relationship breakup may be stronger in the presence of matching partnership type for three additional reasons: 1) maturity, 2) attitudes, and 3) consequences concerning the nature of one's union. First, cohabiting/married siblings might be at a similar relationship stage. Research has indicated that cohabiting and married

individuals differ in life stage, maturity level, and autonomy needs. Compared to the married, cohabitors are more tentative about their relationship and have more non-traditional and permissive traits, lower level of relationship stability, and a stronger desire for independence and freedom (Hiekel et al., 2014; Perelli-Harris et al., 2014; Van Houdt & Poortman, 2018). Second, cohabiting couples have more egalitarian values, gender roles, and labor division than married couples (Clarkberg et al., 1995; Domínguez-Folgueras, 2013; Lesthaeghe, 2010). They also tend to believe less in the importance of marriage and family ties (Clarkberg et al., 1995; Hiekel et al., 2014) and show a higher tolerance for infidelity (Lesthaeghe & Surkyn, 1988). Third, the consequences of union dissolution may differ between cohabiting/married individuals. Although there may be no significant differences in psychological distress following a cohabitation or marriage breakup (Tavares & Aassve, 2013), divorcees tend to suffer financially more than ex-cohabitors (Tach & Eads, 2015). The differences in economic consequences are especially severe among women (Avellar & Smock, 2005; de Regt et al., 2013). Because cohabiting couples contribute more equally to their household income and are more likely to be childless than married couples, their economic consequences diverge less by gender (Manting & Bouman, 2006).

Owing to these differences between cohabitation and marriage and the notion of social identification, siblings belonging to the same partnership type might have more similar values, be able to relate more to each other's situation, and be more alike in life course decisions. Witnessing a sibling of the same partnership type experiencing a union dissolution might also help to overcome or deal with specific consequences. For instance, individuals in a cohabiting union may find a cohabiting sibling's relationship experience more relevant than a married sibling. Similarly, when a sibling undergoes a divorce, married people may consider the event more closely related.

In line with the processes of social influence and social identification, studies on cross-sibling effects have shown that sibling similarity in demographic traits may moderate and help to explain the associations between siblings' decisions and behaviors (Haurin & Mott, 1990; Her et al., 2022; Killoren & Roach, 2014; Mulder et al., 2020). That is, siblings who are close in age or share a similar gender tend to have stronger relational and emotional bonds. Therefore, they often exert a more significant influence on each other's behavior (Burger et al., 2004). Likewise, close-in-age and same-gender siblings might find each other in a similar life stage or possess similar values, possibly demonstrating in-group favoritism. Research suggests that, for instance, siblings are more likely to serve as role models when the age gap is small (Bernardi, 2003). Close-in-age siblings are more likely to pave the way for one another regarding parental home leaving (Her et al., 2022) and fertility (Kuziemko, 2006). Similarly, Sibling similarity can be moderated by gender composition. Compared to opposite-gender siblings, same-gender siblings resemble more in terms of family formation trajectories (Raab et al., 2014) and internal migration patterns (Mulder et al., 2020). As Killoren and Roach (2014) reported, women tend to communicate more frequently and feel more comfortable discussing relationship issues with their sisters than with their brothers. Until now, only one study directly examined the extent to which siblings' similar demographic characteristics moderate the association between siblings' divorce transitions (de Vuijst et al., 2017). Even though they did not find a significant interaction effect, based on the literature and studies on other life courses, we expect that siblings' demographic similarities may enhance sibling resemblance in life course events.

Altogether, individuals may consider siblings with identical partnership types and demographic traits their in-groups and be influenced by their relationship breakup more than the out-group siblings. The current study consists of the following hypotheses. A conceptual model is shown in Figure 1.

H1: For all individuals in a partnership, a sibling's relationship breakup is positively associated with their own breakup (a), and such association is stronger among close-in-age siblings (b) and same-gender siblings (c).

H2: For married individuals, a sibling's divorce, compared to separation is more positively associated with their divorce (a), and the divorce effect is stronger among close-in-age siblings (b) and same-gender siblings (c).

H3: For cohabiting individuals, a sibling's separation, compared to divorce is more positively associated with their separation (a), and the separation effect is stronger among close-in-age siblings (b) and same-gender siblings (c).

[insert Figure 1]

The Family Context

Previous studies aiming to disentangle the effects of social networks, including sibling transmission of life course events, have stressed the importance of considering the issues of confounding and causality (Manski, 1993, 1995). Because siblings often share the same family characteristics and household environments, their behaviors are likely clustered, and therefore, it is not easy to separate sibling influence processes from the role of family context (Buyukkececi & Leopold, 2020; Lyngstad & Prskawetz, 2010). Moreover, full biological siblings also share a large share of genetics (50% on average), being genetically more predisposed to experience similar life course events, which may include partnership dissolution (Axinn et al., 1994; Branigan et al., 2013; McGue & Lykken, 1992). As a result, it is crucial to take shared backgrounds into account. In most empirical analyses, however, the controls for siblings' family context and other shared characteristics are limited. This study attempts to account for time-constant differences between families. It focuses on variation within a family, omitting the possibility that siblings are similar because of their family of origin. Time-constant family characteristics encompass factors such as genetics, family

history, parenting styles, and parental personality traits (Dronkers & Hox, 2006). These attributes are typically inherent or fixed factors, remaining stable over time and changing only gradually. Importantly, they are also challenging to explicitly model as they remain unobserved in most studies.

Method

Dataset Selection and Structure

This longitudinal study uses data from the Belgian population register drawn from the Crossroads Bank of Social Security (CBSS). The register data provide individual-level demographic and socioeconomic information such as age, gender, household composition, employment, and partnership status for the Belgian population from 1998 until 2018. Demographic data such as births and marriages are continuously recorded throughout the years by means of a national registry, whereas data related to employment and income are collected yearly. Our sample consisted of 30,000 randomly selected households, from which one-third had the oldest child born in 1980, one-third in 1975, and one-third with the birth year 1970. The decision to build the sampling upon the firstborn child was driven by the goal of capturing a maximum of transitions in union formation and dissolutions among siblings.

All children are included in the sample for each selected household, enabling us to study associations between siblings' life courses. To determine the correct number of siblings, we tracked all children from the biological mother and biological father of the target sample, provided that they had at least one sibling. If the biological mother or father had children with a new partner, and if the new partner had children from previous relationships, they were identified and included as well, as long as they lived in the same household. Adopted children cannot be identified with the national registry and therefore were excluded from the study.

The previous studies on sibling transmission of divorce risks were limited to families with two children (Buyukkececi & Leopold, 2020; de Vuijst et al., 2017). As this method requires less complicated data handling, the results cannot be generalized to families with more than two children. In the current study, children could either take the role of being at risk of a partnership dissolution or being the potential sibling of influence. The dataset is constructed in a longitudinal format, with each observation representing a year since a child's partnership started. Similar to the approach by Her et al. (2022, 2023), a four-level data structure was created, allowing to examine multiple at-risk children per family. The family level (level 4), as the highest level, clusters the at-risk children (e.g., A, B, C, D) from the same family (level 3). To model the cross-sibling effects, an intermediate sibling dyad level represents pairs of siblings, in which each child can operate either as the observed child (i.e. at risk of a partnership dissolution) or as the modeling sibling to the child at risk (level 2). For instance, when child A is at risk, children B, C, and D would be the modeling siblings, leading to sibling dyads AB, AC, and AD. Those dyads are nested in the at-risk children (e.g. all observed risk sets of child A). The bottom level (level 1), the observation level, indicates the absence or occurrence of a partnership dissolution for the children at risk. Hereafter, the observed children and the modeling siblings are referred to as at-risk individuals and their siblings.

The at-risk individuals were followed from the year they started a partnership until dissolution or censoring. Because our goal was to study the link between siblings' relationship breakups and siblings' union type, our study population was individuals in either a marital or cohabiting union. Cohabitation in the study implied legal/registered cohabitation and cohabitation identified based on the LIPRO typology. Given that the number of cohabiting couples was often underestimated in the official statistics, the Belgian government incorporated the LIPRO typology, which identifies couples living together with high

accuracy (Lodewijckx & Deboosere, 2008; Van den Berg & Mortelmans, 2018). While the at-risk individuals were required to be at least 18 to be included in the risk set, there was no maximum age restriction. Once the at-risk individuals entered the risk set, we included all their siblings, provided that they had not experienced a relationship dissolution before. While previous studies focused only on partnered siblings (Buyukkececi & Leopold, 2020; de Vuijst et al., 2017), we did not distinguish whether they were cohabiting, married, or single. We then observed them until 2018 or whenever the targeted individuals had a separation or divorce. Siblings who had a relationship breakup before the individuals at risk became partnered were omitted as their breakup may not be as relevant (i.e., partnership dissolutions among siblings could only occur in the observation window). Returning to the previous example, as shown in Figure 2, Individual A started cohabitation in 2002 and has three siblings. In the same year, sibling B was single, sibling C was divorced five years ago, and sibling D was married. In this case, we followed sibling B and sibling D and excluded sibling C, which gives us sibling dyads AB and AD. Siblings B and D were monitored until 2007 when individual A had a divorce.

The longitudinal dataset consisted of 1,772,058 dyad-periods or points of observation in time, nested in 137,802 sibling dyads, and embedded in 67,113 at-risk individuals belonging to 29,344 families. Some missing values were observed in the variables included in the analysis (mostly originating from the income variable), which led to a further reduction in the sample size (cf. below).

Measures

Dependent Variable

Descriptive statistics of the variables are presented in Table 1. Our dependent variable indicated whether or not the at-risk individuals had a partnership dissolution event, reflecting their conditional probability of breaking up at any given time (Allison, 1984). Those at risk of

a relationship breakup were either married or cohabiting before having an event. Cohabiters who transitioned from cohabitation to marriage were not considered to have experienced a relationship breakup. Legal divorce procedures are often lengthy, delaying married partners' separation and formal divorce registration; we focused on when partners stopped sharing an address rather than the official divorce (de Vuijst et al., 2017). Therefore, relationship breakups (both separation and divorce) were observed as the time point when individuals were no longer registered in the same household as their partner. In the selected sample, 27.3% of the individuals at risk experienced an event. Based on the type of union they formed, we further divided our sample into two groups to test H2 and H3: the married group (62.5%) and the cohabiting group (37.5%). For the marriage analysis, the outcome reflected whether or not a divorce occurred at each given point in time. In contrast, the analysis of cohabitation reflected the probability of dissolving an unmarried partnership in time. Among the 27.3% experiencing dissolution, 15.4% were marital divorces, while 11.9% were cohabiters who separated. In line with previous research (Pasteels & Mortelmans, 2017), proportionally, the likelihood of breaking up was higher among cohabiters.

[insert Table 1]

Explanatory Variables

To examine whether a sibling's relationship breakup may be transmitted to an at-risk individual, we created a time-varying and dichotomous variable at the sibling dyad level, measuring whether or not the modeling sibling had a breakup. While a value of 1 indicates the siblings having a breakup, 0 is the reference category, meaning that no breakup was observed. Irrespective of siblings' partnership status, they were given a value of 0 if they did not have a relationship breakup and a value of 1 from the year they did (until the at-risk individuals had an event or got censored). It is worthwhile to note that we only examined the first union dissolution observed. Even if the siblings re-partnered after having a union

dissolution, they were still given a value of 1. To distinguish between divorce and separation, we further computed a variable specifying whether siblings had a divorce (ref. = did not have a divorce) and a predictor for their separation from a cohabiting partner (ref. = did not separate).

To measure the extent to which siblings' demographic similarities moderated dissolution (dis)similarities, we used two time-invariant variables at the dyad level: age spacing and gender composition. Age spacing was a continuous variable that calculated the absolute age difference between the siblings observed. Gender composition was a categorical variable accounting for siblings' biological sex with four groups: (1) brothers, (2) sisters, (3) an at-risk man with a female sibling, and (4) an at-risk woman with a male sibling (ref.). The detailed categorization allowed us to look into the effect of gender similarity.

Control and Relevant Variables

We modeled both linear and quadratic time specifications to control for relationship duration, which is the timing since partnership formation. Multiple control variables were included at the individual level, as suggested by past research (Kaplan & Herbst, 2015; Manning, 2004; Tzeng & Mare, 1995). Age was modeled as a continuous variable, whereas gender was a binary variable, measuring sex at birth, with male being the reference category. Relationship status measured the type of union formed before a potential event based on the individuals' cohabitation and marriage history and had three categories: (1) never-married cohabitation, (2) married without having pre-marital cohabitation, and (3) married with pre-marital cohabitation (ref.). This variable was included as time constant so that the years of cohabitation before marriage for those who experienced pre-marital cohabitation did not add to the risk set. Number of children was included as a time-varying variable measuring the number of children aged below 18 one had.

As for socio-economic status, we accounted for the individuals' time-constant educational attainment and time-varying household income and labor force participation. Education was categorized into (1) high (ref.), (2) middle, and (3) low based on the highest education level achieved. Household income measured the yearly equivalized household OECD income in classes of 25 Euro. Labor force participation encompassed four groups: (1) full-time jobs (ref.), (2) part-time jobs, (3) unemployed, and (4) others. In Table 1, we additionally present the sibship size and the proportion of divorced parents at the family level. Yet, because of the analytical strategy used in the study, these two pieces of information were not used in the multivariate analysis. For most of the variables used in the study, there was a minimal share of missing values (less than 1.9%)[1]. However, there were 13,203 missing cases for household income, which accounts for approximately 19.7% of the observations at the individual level.

Analytical Strategy and Identification of Cross-Sibling Effects

As discussed earlier, siblings might exhibit similarity in relationship dissolution because of contextual and correlated factors, such as shared parental and environmental characteristics (Manski, 1993, 1995). To tackle these issues, we employed family-level fixed-effects models to control for time-constant (un)observed heterogeneity across families (Allison, 2009). The fixed-effects approach capitalizes on changes occurring within families over time. It is deemed more appropriate than hierarchical regression strategies, which may reflect variations between families and impact the regression parameters of interest accordingly. Previous studies concerning cross-sibling effects life course transitions mostly utilized a random-effects (multilevel) model to assess the clustering of sibling divorce risks (Buyukkececi & Leopold, 2020; Buyukkececi et al., 2020; de Vuijst et al., 2017; Lyngstad &

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[1] Age: 501 missings, gender: 11 missings, number of children: 324 missings, age spacing: 2,559 missings, gender composition: 211 missings, sibship size: 111 missings.

Prskawetz, 2010). Although the random-effects approach may yield unbiased parameter standard errors, it is unlikely to take shared family background adequately into account unless included explicitly as a covariate in the model (Allison, 2009). To our knowledge, only one study applied family fixed effects as a robustness check to examine siblings' transitions to independent living (Her et al., 2023). In this study, the family effect is held fixed in the discrete-time event history analysis, using conditional logit models by means of PROC LOGISTIC in SAS 9.4. To apply the fixed effects, we used the family identification and created (n – 1) dummies for each family. Mathematically, the model that was estimated can be written as

$$In \frac{P(Y_{fist} = 1)}{1 - P(Y_{fist} = 1)} = \alpha_t + \beta X_{is} + \delta Z_{ist} + \lambda M_s + \nu N_{st} + \eta_f$$

where Y_{ijt} represents the outcome variable, α_t reflects the duration baseline parameters, β and δ are parameters for time-constant and time-varying individual-level variables, λ and ν are parameters for time-constant and time-varying sibling-level variables, and η_f represents the family dummies.

This analytical approach has two implications. First, it necessitates multiple observations of children (at least two) per family. Second, estimates are only derived for children within the same household who exhibit variation in the outcome variable (i.e., at least one child experienced a breakup). In Tables 2 and 3, we report the number of observations showing variation in the dependent variable per model. Given that the current literature primarily draws on between-family approaches, as a sensitivity analysis, we verified whether our results are in line with the existing evidence with family-level random-effects models.

Results

Table 2 presents the regression parameters of the fixed-effects event history models in which the outcome varied. The analysis of the full sample is shown in Model 1, whereas Models 2 and 3 consider the married and cohabiting individuals, respectively. All models include the baseline time specifications and relevant control variables. As illustrated in Model 1, contrary to our expectation, a sibling's breakup was negatively related to one's odds of having a breakup ($b = -1.179$, $SE = 0.022$). In other words, when the at-risk individuals had a sibling who divorced or separated, the likelihood that they dissolved their partnership decreased. Models 2 and 3 distinguish divorce and separation to uncover whether partnership type mattered. Based on Model 2, the married individuals were significantly less likely to experience a divorce if the modeling sibling had a divorce ($b = -1.643$, $SE = 0.038$). However, observing a cohabiting sibling experiencing a separation did affect one's risk of ending a marriage ($b = -0.020$, $SE = 0.061$). For cohabiters (Model 3), a sibling's separation was negatively related to one's likelihood of breaking up ($b = -1.199$, $SE = 0.044$). In contrast, a sibling's divorce appeared to be positively linked, though to a lesser extent ($b = 0.162$, $SE = 0.054$). Despite the above findings not being in line with H1a, H2a, and H3a, the negative connection between siblings' breakups was more pronounced when partnership types were similar.

[insert Table 2]

Table 3 shows the regression parameters of the models testing interaction effects, by which we examined the extent to which the dissolution effects examined in Table 2 were moderated by siblings' demographic similarities. Similar to Table 2, Model 4 pools both partnership types, while Models 5 and 6 distinguish between marriage and cohabitation. A positive interaction effect by siblings' age spacing was found in Model 4, suggesting that the larger the age gap between siblings, the less negative the association between siblings'

breakups was. This indicates that one's relationship dissolution may particularly protect close-in-age siblings from ending a union relative to siblings of wider age spacing. As shown in Model 5, we found that for married individuals, having a close-in-age sibling encountering a divorce decreased one's own risk of divorce to a greater extent than did a distant-in-age sibling. For the cohabiters, the negative effect of a sibling's separation was also smaller when their ages were more distant. Moreover, the divorce effect of a sibling turned positive when siblings had an age gap equal to or greater than 3 (3 x (0.036-0.017) – 0.055). Based on these results, H1b, H2b, and H3b were supported. Across all three models, however, we did not find a significant moderation effect of siblings' gender composition (no support for H1c, H2c, and H3c).

Applying family-level random effects, the results of our robustness check showed that siblings' risks of experiencing a relationship breakup are negatively associated (b = -0.590, SE = 0.023)[2]. Despite the effect's magnitude being smaller than that of the main analysis (Model 1 of Table 2), it remained in the same direction.

[insert Table 3]

Discussion

In contemporary Europe, a particular combination of low marriage rates and high divorce rates has been observed, and partners have been increasingly living together without being married (Eurostat, 2015, 2022). Importantly, unmarried partnerships exhibit even higher dissolution risks than marriage (Pasteels & Mortelmans, 2017; Van den Berg & Mortelmans, 2018). The present study investigated the intragenerational transmission of partnership dissolution in Belgium, i.e. whether there is a between-sibling similarity in terminating a partnership, using the register data from 1998 to 2018. Importantly, we

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[2] Full table available upon request.

explored whether the association between siblings' relationship breakups is more pronounced regarding sibling similarity in partnership type and demographic traits. As opposed to previous studies (Buyukkececi & Leopold, 2020; de Vuijst et al., 2017), we found that a sibling's relationship breakup may protect one from dissolving a union. We explain the findings with the following three reasons.

First, although studies have suggested a general trend that siblings' divorce risks are positively connected (Buyukkececi & Leopold, 2020; de Vuijst et al., 2017), some nuances may be behind the results. According to de Vuijst et al. (2017), a sibling's divorce was positively related to one's own divorce risk; if one sibling divorced within the observed 13-year period (2000–2012), the likelihood of the other sibling divorcing also increased during that time. For Buyukkececi and Leopold (2020), having a divorced sibling was also positively related to one's probability of divorcing, but only in the long term (i.e., sibling divorced three years ago) and without accounting for any control variables. Correcting for potential confounders, the predictive value of a sibling's divorce vanished. In the short term, a sibling's divorce was negatively and non-significantly connected to one's own risk in both models. Moreover, McDermott et al. (2013) found that transmission of divorce occurs only among friends and not among siblings, neighbors, and co-workers. All these imply inconsistent findings concerning cross-sibling effects on divorce risks, which calls for more research on the topic.

Second, we used family fixed-effects models, which allows us to take a within-family approach and, hence, to rule out confounding factors that are time-constant and related to the family of origin (Allison, 2009), compared to the other studies employing random effects (Buyukkececi & Leopold, 2020; de Vuijst et al., 2017). While the effects found in the previous studies are valid, they are more likely to be driven by influence from the shared family context. As Dronkers and Hox (2006) noted, multilevel analysis is limited in

accounting for unmeasured family characteristics (e.g., shared genetic and social heritage), which could contribute to resembling divorce risks within families. Based on the results of the within-family approach, it is likely that a sibling's partnership dissolution dissuades an at-risk individual from ending their union. Although the results of our robustness check using random effects similarly suggest the protective role of a sibling's union dissolution, it is so to a lesser extent and might contain biases from family-level confounders.

The third explanation is attributed to the notions of sibling deidentification and social learning and the consequences of union disruption. Sibling deidentification, as an alternative process of social influence, suggests that siblings may exert themselves to become different from each other (Schachter et al., 1976). It contributes to engaging in different activities and behaviors among siblings that allow them to be different from one another (Whiteman et al., 2007). Given the challenges associated with the transition, we argued that sibling deidentification becomes particularly noticeable regarding relationship breakup. The negative association could also be understood from the social learning perspective, which states that individuals try to learn from their siblings' adverse life experiences and seek alternative solutions in relationship crises. Concerning education, parental home leaving, marriage, and childbearing, which are often regarded as positive or neutral events, it is more reasonable for a positive cross-sibling effect to occur (Buyukkececi & Leopold, 2020; Her et al., 2022; Kuziemko, 2006; Lyngstad & Prskawetz, 2010; van Eijck, 1997). For union dissolution, however, the social influence processes can be different. Past research has demonstrated the economic consequences associated with relationship dissolution (Avellar & Smock, 2005; de Regt et al., 2013; Kalmijn, 2005; Manting & Bouman, 2006; Poortman, 2000; Thielemans & Mortelmans, 2022). For instance, after divorce, women lose the income their husbands have contributed and alimony payments do not necessarily compensate for all the losses (Kalmijn, 2005; Poortman, 2000). Moreover, union dissolution may worsen men's and women's

employment trajectories and career prospects (Kalmijn, 2005; Poortman, 2000). It is worth mentioning that the study period covered the Great Recession in 2008, which impacted many countries' employment rates, including Belgium's. The country's unemployment rate increased following the financial crisis, similar to other European countries such as France, Italy, and Finland (Solaz et al., 2020). During this period, some individuals experiencing divorce or separation might have faced worsened economic consequences. It also means that witnessing a sibling's break up and its consequences may have had a more protective impact on one's own partnership in this period.

The psychological costs of breaking up have also been documented, that divorce and separation often lead to intense emotional distress, as the loss of a significant relationship can trigger a range of negative emotions (Amato, 2000; Tavares & Aassve, 2013). The negative consequences may be particularly severe for parents (Kamp Dush, 2013). Some individuals might become sole parents or lose custody of children due to partnership dissolution. Furthermore, it is related to reduced social contacts and integration (Kalmijn & van Groenou, 2005; Terhell et al., 2004), which clearly affect loneliness (van Tilburg et al., 2015). Those psychological and social costs might be more severe in countries with a higher intolerance toward relationship disruption (Kalmijn & Uunk, 2007). Intolerance levels vary across Europe, with Belgium ranking slightly above the average. This places it higher than its neighboring countries, such as Germany, France, and the Netherlands, but lower than Italy and Ireland (Kalmijn & Uunk, 2007). Altogether, when individuals receive information about the divorce or separation experience of someone close to them, such as a sibling, it may significantly impact on their considerations regarding partnership dissolution. This arises from acknowledging its potential negative consequences, even if they are currently not satisfied in their relationship. By witnessing firsthand the emotional turmoil, financial strain, and social disruptions often accompanying a marriage or long-term relationship dissolution,

individuals may become more cautious about pursuing a similar path and the trade-offs involved in ending a relationship.

The current study also adds to the literature by distinguishing between siblings' partnership types. We observed that the negative association between siblings' relationship breakups existed mostly when they belonged to the same partnership type. Our findings suggest that only a sibling's divorce decreased married individuals' risks of divorcing. Likewise, a separated sibling protected cohabitors from ending a relationship to a larger extent than a divorced sibling. This implies that there may be an in-group effect resulting from partnership similarity, that people are more inclined to change their behaviors in response to the in-group siblings (Abrams & Hogg, 1990; Hornsey, 2008). Cohabiting/married siblings often share similarities in maturity, attitudes, and consequences related to the nature of their relationship and find themselves at a similar relationship stage (Clarkberg et al., 1995; Hiekel et al., 2014; Kreidl & Žilinčíková, 2021; Tach & Eads, 2015). While cohabitors exhibit more tentative family attitudes and non-traditional traits, married couples may hold less egalitarian values and have different perceptions of marriage and family ties (Clarkberg et al., 1995; Domínguez-Folgueras, 2013; Hiekel et al., 2014; Lesthaeghe, 2010; Perelli-Harris et al., 2014). The financial impact of union dissolution may vary between cohabiting and married individuals. Although both experience financial strain after ending a romantic relationship, ex-cohabitors typically face lesser burdens than those previously married (Avellar & Smock, 2005; Manting & Bouman, 2006). These differences underscore why witnessing a sibling's breakup in a similar relationship type is relatable. In essence, sibling deidentification is more pronounced, and a sibling's breakup can better protect against one's union dissolution when the partnership type is similar.

Next to partnership similarity, we found that close-in-age siblings positively moderated the association between siblings' relationship breakups but not same-gender

siblings. This implies that the closer the age spacing between siblings is, the more likely an individual's decision to dissolve a union is discouraged by a sibling's. Previous studies investigating the moderating role of siblings' demographic similarities typically suggest that their behaviors resemble more strongly when there is closeness in terms of age and gender (Her et al., 2022; Killoren & Roach, 2014; Kuziemko, 2006; Mulder et al., 2020). In this study, we observed that close-in-age siblings seem to particularly avoid mirroring each other's union disruption. This is in accordance with the notion of sibling deidentification, which states that the deidentification dynamics are more prevalent for siblings similar in age (Schachter et al., 1976). In both cases, a small age gap strengthens the sibling influence found. When analyzing marriage and cohabitation separately, the moderating role of the age gap was more visible when there was partnership similarity. Contrary to our expectation, compared to opposite-sex siblings, being brothers or sisters was unrelated to the association between siblings' relationship breakups. This implies that although the social influence processes are believed to operate better when similarities are observed, they may vary depending on the outcome of interest and study design. Moreover, as siblings' gender composition may only be a proxy for their relationship quality, support, and contact regularity, we could not directly examine if same-gender siblings indeed favor each other more and hold identical attitudes and values (de Vuijst et al., 2017).

Some limitations of the study should be addressed when interpreting the results. First, despite controlling for time-constant heterogeneity and confounders at the family level using fixed effects, and a set of time-(in)variant covariates at the individual and sibling dyad level, spuriousness may still arise from time-varying family characteristics and other variables at the lower levels that we could not account for. In particular, due to data limitations, we could not consider multiple divorces and re-partnering of the parents. Moreover, due to software limitations, clustering at the lower levels (e.g., robust standard error) was not incorporated.

Second, we do not know the exact reason why an individual's risk of breaking up is reduced after witnessing a sibling's breakup. Suppose a siblings' divorce/separation serves as a protective factor for one's own relationship progression. In that case, it is important to understand the underlying channels (e.g., whether it is because of the event's adverse nature). Therefore, we highly encourage future researchers to uncover the mechanisms, delving into e.g., why such cross-sibling influence is stronger when siblings belong to the same partnership type. Third, we only focused on the dyadic sibling influence and did not take into account the impact of multiple partnership breakups in one family among larger families. Likewise, we only examined first-time union dissolutions and not subsequent ones. Fourth, because of the use of register data, we could not incorporate information such as sexual orientation, ethnicity, and disability. For the same reason, we also could not examine the role of close friends and colleagues. Further research should study social network effects more comprehensively by including those aspects if possible. Moreover, in light of the growing number of single-living individuals (van den Berg & Verbakel, 2022), we highly encourage future research to examine whether single, partnered, and separated siblings play different roles in one's risk of union dissolution.

To conclude, the study is the first to investigate the extent to which siblings' relationship breakups by incorporating both married and cohabiting couples and by applying a within-family approach. Although multiple studies have shown that siblings tend to resemble each other in terms of life course transitions, a sibling's partnership dissolution may in fact contribute to union stability. Unlike education, leaving the parental home, marriage, and childbearing, divorce and separation are often related to adversity. When siblings exchange information and support, the partnered sibling may learn from the adverse event of the divorced/separated sibling. In contrast, the divorced/separated sibling might convince the partnered one not to follow in their footsteps. These findings have significant implications for

policymakers, families, and other stakeholders involved in supporting healthy relationships. For example, parents could facilitate regular family meetings as an opportunity for siblings to discuss their relationship situation and any struggles they may have. Further research and interventional studies are needed to understand and capitalize on the protective impact of sibling relationships to promote stable unions and enhance relationship outcomes for individuals.

References

Abrams, D., & Hogg, M. A. (1990). Social identification, self-categorization and social influence. *European Review of Social Psychology*, *1*(1), 195-228. https://doi.org/10.1080/14792779108401862

Allison, P. D. (1984). *Event history analysis: Regression for longitudinal event data*. Sage.

Allison, P. D. (2009). *Fixed effects regression models*. SAGE publications.

Amato, P. R. (2000). The consequences of divorce for adults and children. *Journal of Marriage and Family*, *62*(4), 1269-1287. https://doi.org/10.1111/j.1741-3737.2000.01269.x

Avellar, S., & Smock, P. J. (2005). The economic consequences of the dissolution of cohabiting unions. *Journal of Marriage and Family*, *67*(2), 315-327. https://doi.org/10.1111/j.0022-2445.2005.00118.x

Axinn, W. G., Clarkberg, M. E., & Thornton, A. (1994). Family influences on family size preferences. *Demography*, *31*(1), 65-79. https://doi.org/10.2307/2061908

Bandura, A. (1977). *Social learning theory*. Prentice Hall.

Bernardi, L. (2003). Channels of social influence on reproduction. *Population Research and Policy Review*, *22*(5-6), 527-555. https://doi.org/10.1023/b:Popu.0000020892.15221.44

Bernardi, L., & Klärner, A. (2014). Social networks and fertility. *Demographic Research*, *30*, 641-670. https://doi.org/10.4054/DemRes.2014.30.22

Boertien, D. (2020). The conceptual and empirical challenges of estimating trends in union stability: Have unions become more stable in Britain? In D. Mortelmans (Ed.), *Divorce in Europe: New insights in trends, causes and consequences of relation break-ups* (pp. 17-36). Springer International Publishing. https://doi.org/10.1007/978-3-030-25838-2_2

Branigan, A. R., McCallum, K. J., & Freese, J. (2013). Variation in the heritability of educational attainment: An international meta-analysis. *Social Forces*, *92*(1), 109-140. https://doi.org/10.1093/sf/sot076

Burger, J. M., Messian, N., Patel, S., Del Prado, A., & Anderson, C. (2004). What a coincidence! The effects of incidental similarity on compliance. *Personality and Social Psychology Bulletin*, *30*(1), 35-43. https://doi.org/10.1177/0146167203258838

Buyukkececi, Z., & Leopold, T. (2020). Sibling influence on family formation: A study of social interaction effects on fertility, marriage, and divorce. *Advances in Life Course Research*, 100359. https://doi.org/10.1016/j.alcr.2020.100359

Buyukkececi, Z., Leopold, T., van Gaalen, R., & Engelhardt, H. (2020). Family, firms, and fertility: A study of social interaction effects. *Demography*, *57*(1), 243-266. https://doi.org/10.1007/s13524-019-00841-y

Cassinat, J. R., & Jensen, A. C. (2020). Following in your sibling's steps: Sibling influence and young adults' marital attitudes. *Journal of Social and Personal Relationships*, *37*(3), 885-905. https://doi.org/10.1177/0265407519881511

Cialdini, R. B., & Goldstein, N. J. (2004). Social influence: Compliance and conformity. *Annual Review of Psychology*, *55*, 591-621. https://doi.org/10.1146/annurev.psych.55.090902.142015

Cicirelli, V. G. (1995). *Sibling relationships across the life span*. Springer. https://doi.org/10.1007/978-1-4757-6509-0

Clarkberg, M., Stolzenberg, R. M., & Waite, L. J. (1995). Attitudes, values, and entrance into cohabitational versus marital unions. *Social Forces*, *74*(2), 609-632. https://doi.org/10.2307/2580494

Conger, K. J., & Little, W. M. (2010). Sibling relationships during the transition to adulthood. *Child Development Perspectives*, *4*(2), 87-94. https://doi.org/10.1111/j.1750-8606.2010.00123.x

Connidis, I. A. (1992). Life transitions and the adult sibling tie - A qualitative study. *Journal of Marriage and Family*, *54*(4), 972-982. https://doi.org/10.2307/353176

de Regt, S., Mortelmans, D., & Marynissen, T. (2013). Financial consequences of relationship dissolution: A longitudinal comparison of formerly married and unmarried cohabiting men and women. *Sociology*, *47*(1), 90-108. https://doi.org/10.1177/0038038512453793

de Vuijst, E., Poortman, A., Das, M., & van Gaalen, R. (2017). Cross-sibling effects on divorce in the Netherlands. *Advances in Life Course Research*, *34*, 1-9. https://doi.org/10.1016/j.alcr.2017.06.003

Domínguez-Folgueras, M. (2013). Is cohabitation more egalitarian? The division of household labor in five European countries. *Journal of Family Issues*, *34*(12), 1623-1646. https://doi.org/10.1177/0192513X12464948

Dronkers, J., & Hox, J. (2006). The importance of the common family background for the similarity of divorce risks of siblings: A multi-level event history analysis. In F. J. Yammarino & F. Dansereau (Eds.), *Multilevel issues in social systems* (Vol. 5, pp. 217-238). Emerald Group Publishing Limited. https://doi.org/10.1016/S1475-9144(06)05010-7

Eurostat. (2015). *Demography report.* Publications Office of the European Union.

Eurostat. (2022). *Divorce indicators.* [Data set]. https://doi.org/10.2908/DEMO_NDIVIND

Gassen, N. S. (2023). Increasing cohabitation and decreasing marriage: Explanations. In M. Daly, B. Pfau-Effinger, N. Gilbert, & D. J. Besharov (Eds.), *The Oxford handbook of family policy over the life course* (pp. 419-436). Oxford University Press.

Hamwey, M. K., Rolan, E. P., Jensen, A. C., & Whiteman, S. D. (2019). "Absence makes the heart grow fonder": A qualitative examination of sibling relationships during emerging adulthood. *Journal of Social and Personal Relationships*, *36*(8), 2487-2506. https://doi.org/10.1177/0265407518789514

Haurin, R. J., & Mott, F. L. (1990). Adolescent sexual activity in the family context: The impact of older siblings. *Demography*, *27*(4), 537-557. https://doi.org/10.2307/2061569

Her, Y.-C., Vergauwen, J., & Mortelmans, D. (2022). Nest leaver or home stayer? Sibling influence on parental home leaving in the United Kingdom. *Advances in Life Course Research*, *52*, 100464. https://doi.org/10.1016/j.alcr.2022.100464

Her, Y.-C., Vergauwen, J., & Mortelmans, D. (2023). Do birds of a feather leave the nest together? The role of sibling personality similarity in the transition to adulthood. *PLoS One*, *18*(5), e0284808. https://doi.org/10.1371/journal.pone.0284808

Hiekel, N., Liefbroer, A. C., & Poortman, A.-R. (2014). Understanding diversity in the meaning of cohabitation across Europe. *European Journal of Population*, *30*(4), 391-410. https://doi.org/10.1007/s10680-014-9321-1

Hornsey, M. J. (2008). Social identity theory and self-categorization theory: A historical review. *Social and Personality Psychology Compass*, *2*(1), 204-222. https://doi.org/10.1111/j.1751-9004.2007.00066.x

Jensen, A. C., Nielson, M. K., & Yorgason, J. B. (2020). The longest-lasting relationship: Patterns of contact and well-being among mid-to later-life siblings. *The Journals of Gerontology: Series B*, *75*(10), 2240-2249. https://doi.org/10.1093/geronb/gbz083

Jensen, A. C., Whiteman, S. D., & Fingerman, K. L. (2018). "Can't live with or without them:" Transitions and young adults' perceptions of sibling relationships. *Journal of Family Psychology*, *32*(3), 385. https://doi.org/10.1037/fam0000361

Kalmijn, M. (2005). The effects of divorce on men's employment and social security histories. *European Journal of Population*, *21*(4), 347-366. https://doi.org/10.1007/s10680-005-0200-7

Kalmijn, M., & Uunk, W. (2007). Regional value differences in Europe and the social consequences of divorce: A test of the stigmatization hypothesis. *Social Science Research*, *36*(2), 447-468. https://doi.org/10.1016/j.ssresearch.2006.06.001

Kalmijn, M., & van Groenou, M. B. (2005). Differential effects of divorce on social integration. *Journal of Social and Personal Relationships*, *22*(4), 455-476. https://doi.org/10.1177/0265407505054516

Kamp Dush, C. M. (2013). Marital and cohabitation dissolution and parental depressive symptoms in fragile families. *Journal of Marriage and Family*, *75*(1), 91-109. https://doi.org/10.1111/j.1741-3737.2012.01020.x

Kaplan, A., & Herbst, A. (2015). Stratified patterns of divorce: Earnings, education, and gender. *Demographic Research*, *32*, 949-982. https://doi.org/10.4054/DemRes.2015.32.34

Kiernan, K. (2004). Unmarried cohabitation and parenthood in Britain and Europe. *Law & Policy*, *26*(1), 33-55. https://doi.org/10.1111/j.0265-8240.2004.00162.x

Killoren, S. E., & Roach, A. L. (2014). Sibling conversations about dating and sexuality: Sisters as confidants, sources of support, and mentors. *Family Relations*, *63*(2), 232-243. https://doi.org/10.1111/fare.12057

Kołodziej-Zaleska, A., & Przybyła-Basista, H. (2016). Psychological well-being of individuals after divorce: The role of social support. *Current Issues in Personality Psychology*, *4*(4), 206-216. https://doi.org/10.5114/cipp.2016.62940

Kreidl, M., & Žilinčíková, Z. (2021). How does cohabitation change people's attitudes toward family dissolution? *European Sociological Review*, *37*(4), 541-554. https://doi.org/10.1093/esr/jcaa073

Kuziemko, I. (2006). *Is having babies contagious? Estimating fertility peer effects between siblings* [Unpublished manuscript]. Graduate Business School, Columbia Business School, New York, NY.

Lesthaeghe, R. (2010). The unfolding story of the second demographic transition. *Population and Development Review*, *36*(2), 211-251. https://doi.org/10.1111/j.1728-4457.2010.00328.x

Lesthaeghe, R., & Surkyn, J. (1988). Cultural dynamics and economic theories of fertility change. *Population and Development Review*, *14*(1), 1-45. https://doi.org/10.2307/1972499

Lodewijckx, E., & Deboosere, P. (2008). Lipro: Een classificatie van huishoudens. *SVR-Technisch Rapport*, *2*.

Lyngstad, T. H., & Prskawetz, A. (2010). Do siblings' fertility decisions influence each other? *Demography*, *47*(4), 923-934. https://doi.org/10.1007/BF03213733

Manning, W. D. (2004). Children and the stability of cohabiting couples. *Journal of Marriage and Family*, *66*(3), 674-689. https://doi.org/10.1111/j.0022-2445.2004.00046.x

Manski, C. F. (1993). Identification of endogenous social effects: The reflection problem. *The Review of Economic Studies*, *60*(3), 531-542. https://doi.org/10.2307/2298123

Manski, C. F. (1995). *Identification problems in the social sciences*. Harvard University Press.

Manting, D., & Bouman, A. M. (2006). Short-and long-term economic consequences of the dissolution of marital and consensual unions. The example of the Netherlands. *European Sociological Review*, *22*(4), 413-429. https://doi.org/10.1093/esr/jcl005

McDermott, R., Fowler, J. H., & Christakis, N. A. (2013). Breaking up is hard to do, unless everyone else is doing it too: Social network effects on divorce in a longitudinal sample. *Social Forces*, *92*(2), 491-519. https://doi.org/10.1093/sf/sot096

McGue, M., & Lykken, D. T. (1992). Genetic influence on risk of divorce. *Psychological Science*, *3*(6), 368-373. https://doi.org/10.1111/j.1467-9280.1992.tb00049.x

McHale, S. M., Updegraff, K. A., & Whiteman, S. D. (2012). Sibling relationships and influences in childhood and adolescence. *Journal of Marriage and Family*, *74*(5), 913-930. https://doi.org/10.1111/j.1741-3737.2012.01011.x

Mortelmans, D. (Ed.). (2020). *Divorce in Europe: New insights in trends, causes and consequences of relation break-ups*. Springer Nature. https://doi.org/10.1007/978-3-030-25838-2.

Mulder, C. H., Lundholm, E., & Malmberg, G. (2020). Young adults' migration to cities in Sweden: Do siblings pave the way? *Demography*, *57*(6), 2221-2244. https://doi.org/10.1007/s13524-020-00934-z

Pasteels, I., & Mortelmans, D. (2017). The socioeconomic determinants of repartnering after divorce or separation in Belgium. *Demographic Research*, *36*, 1785-1812. https://doi.org/10.4054/DemRes.2017.36.58

Perelli-Harris, B., Mynarska, M., Berrington, A., Berghammer, C., Evans, A., Isupova, O., Keizer, R., Klärner, A., Lappegård, T., & Vignoli, D. (2014). Towards a new understanding of cohabitation: Insights from focus group research across Europe and Australia. *Demographic Research*, *31*, 1043-1078. https://doi.org/10.4054/DemRes.2014.31.34

Poortman, A.-R. (2000). Sex differences in the economic consequences of separation: A panel study of the Netherlands. *European Sociological Review*, *16*(4), 367-383. https://doi.org/10.1093/esr/16.4.367

Raab, M., Fasang, A. E., Karhula, A., & Erola, J. (2014). Sibling similarity in family formation. *Demography*, *51*(6), 2127-2154. https://doi.org/10.1007/s13524-014-0341-6

Schachter, F. F., Shore, E., Feldman-Rotman, S., Marquis, R. E., & Campbell, S. (1976). Sibling deidentification. *Developmental Psychology*, *12*(5), 418. https://doi.org/10.1037/0012-1649.12.5.418

Snoeckx, L., Dronkers, J., & Mortelmans, D. (2008). Cross-regional divorce risks in Belgium. *Paper presented at the fifth meeting of the European Network for the Sociological and Demographic Study of Divorce, London, UK*.

Solaz, A., Jalovaara, M., Kreyenfeld, M., Meggiolaro, S., Mortelmans, D., & Pasteels, I. (2020). Unemployment and separation: Evidence from five European countries. *Journal of Family Research*, *32*(1), 145-176. https://doi.org/10.20377/jfr-368

Statbel. (2023). *Decrease in divorce rate and children's residence more often with the second ex-spouse* [Data set]. https://statbel.fgov.be/en/themes/population/partnership/divorces

Tach, L. M., & Eads, A. (2015). Trends in the economic consequences of marital and cohabitation dissolution in the United States. *Demography*, *52*(2), 401-432. https://doi.org/10.1007/s13524-015-0374-5

Tajfel, H., & Turner, J. C. (1979). An integrative theory of intergroup conflict. In J. A. Williams & S. Worchel (Eds.), *The social psychology of intergroup relations* (pp. 33-47). Wadsworth.

Tajfel, H. E. (1978). *Differentiation between social groups: Studies in the social psychology of intergroup relations*. Academic Press.

Tavares, L. P., & Aassve, A. (2013). Psychological distress of marital and cohabitation breakups. *Social Science Research*, *42*(6), 1599-1611. https://doi.org/10.1016/j.ssresearch.2013.07.008

Terhell, E. L., Broese van Groenou, M. I., & Van Tilburg, T. (2004). Network dynamics in the long-term period after divorce. *Journal of Social and Personal Relationships*, *21*(6), 719-738. https://doi.org/10.1177/0265407504047833

Thielemans, G., & Mortelmans, D. (2022). Poverty risks after relationship dissolution and the role of children: A contemporary longitudinal analysis of seven OECD countries. *Social Sciences*, *11*(3), 138. https://doi.org/10.3390/socsci11030138

Tzeng, J. M., & Mare, R. D. (1995). Labor market and socioeconomic effects on marital stability. *Social Science Research*, *24*(4), 329-351. https://doi.org/10.1006/ssre.1995.1013

Van den Berg, L., & Mortelmans, D. (2018). De Onzichtbare Scheidingsgolf: Een analyse van relatieontbinding van samenwonenden en gehuwden in België. *Relaties en Nieuwe Gezinnen*, *8*(1), 1-31. https://doi.org/10.21825/reng.v8i1.18262

van den Berg, L., & Verbakel, E. (2022). Trends in singlehood in young adulthood in Europe. *Advances in Life Course Research*, *51*, 100449. https://doi.org/10.1016/j.alcr.2021.100449

van Eijck, K. (1997). The impact of family background and educational attainment on cultural consumption: A sibling analysis. *Poetics*, *25*(4), 195-224. https://doi.org/10.1016/S0304-422X(97)00017-X

Van Houdt, K., & Poortman, A.-R. (2018). Joint lifestyles and the risk of union dissolution: Differences between marriage and cohabitation. *Demographic Research*, *39*, 431-458. https://doi.org/10.4054/DemRes.2018.39.15

van Tilburg, T. G., Aartsen, M. J., & van der Pas, S. (2015). Loneliness after divorce: A cohort comparison among Dutch young-old adults. *European Sociological Review*, *31*(3), 243-252. https://doi.org/10.1093/esr/jcu086

Voorpostel, M. (2007). *Sibling support: The exchange of help among brothers and sisters in the Netherlands*. Utrecht University.

White, L. (2001). Sibling relationships over the life course: A panel analysis. *Journal of Marriage and Family*, *63*(2), 555-568.

Whiteman, S. D., Jensen, A. C., & Maggs, J. L. (2014). Similarities and differences in adolescent siblings' alcohol-related attitudes, use, and delinquency: Evidence for convergent and divergent influence processes. *Journal of Youth and Adolescence*, *43*(5), 687-697. https://doi.org/10.1007/s10964-013-9971-z

Whiteman, S. D., McHale, S. M., & Crouter, A. C. (2007). Competing processes of sibling influence: Observational learning and sibling deidentification. *Social Development*, *16*(4), 642-661. https://doi.org/10.1111/j.1467-9507.2007.00409.x

Wolfinger, N. H. (2011). More evidence for trends in the intergenerational transmission of divorce: A completed cohort approach using data from the General Social Survey. *Demography*, *48*(2), 581-592. https://doi.org/10.1007/s13524-011-0025-4

Wolfinger, N. H. (2016). Beyond the intergenerational transmission of divorce. *Journal of Family Issues*, *21*(8), 1061-1086. https://doi.org/10.1177/019251300021008006

Table 1

Descriptive Statistics

	M	SD	N	%
Parental level characteristics (N_{family} = 29,344)				
Sibship size	2.71	1.10		
Parental divorce (not included in the analysis)				
Yes			1,845	6.3%
No			27,499	93.7%
Individual level characteristics ($N_{individual}$ = 67,113)				
Event*				
Relationship breakup			18,338	27.3%
(Divorce)			(10,348)	(15.4%)
(Separation)			(7,990)	(11.9%)
No event			48,775	72.7%
Age*	38.72	6.28		
Gender				
Man			32,893	49.0%
Woman			34,211	51.0%
Relationship status				
Married without premarital cohabitation			21,670	32.3%
Cohabiting			25,163	37.5%
Married with premarital cohabitation			20,280	30.2%
N children under age 18*	2.02	0.77		
Education				
High			16,815	25.1%
Middle			20,015	29.8%
Low			30,283	45.1%
Equivalized household OECD income (by €1000)*	2.73	1.73		
Labor participation*				
Full-time job			53,910	80.3%
Part-time job			5,960	8.9%
Unemployment			2,008	3.0%
Others			5,235	7.8%
Sibling level characteristics (N_{dyad} = 137,802)				
Age spacing	5.78	4.85		
Gender composition				
Woman with male sibling			35,702	26.0%
Man with female sibling			32,401	23.5%
Brothers			34,210	24.9%

Sisters	35,278	25.6%
Whether sibling had a breakup[*]		
Yes	26,521	19.3%
No	111,281	80.7%
Whether sibling had a divorce[*]		
Yes	15,221	11.1%
No	122,581	88.9%
Whether sibling had a separation[*]		
Yes	11,300	8.2%
No	126,502	91.8%

Note: For the time-variant variables ([*]), we present the descriptive statistics of the last

observed wave.

Source: Belgian national registers from the CBSS, calculations by authors.

Table 2

Discrete-Time Event History Analysis Predicting an Individual's Risk of Relationship

Dissolution

	Model 1	Model 2	Model 3
	All partnership types	Marriage	Cohabitation
Individual level characteristics			
Duration since partnership formation	0.062***	0.193***	0.125***
	(0.005)	(0.009)	(0.010)
Duration^2 since partnership formation	0.001***	-0.003***	-0.001
	(0.000)	(0.000)	(0.001)
Age	0.081***	0.071***	0.132***
	(0.003)	(0.004)	(0.005)
Woman (ref = man)	-0.015	0.209***	-0.248***
	(0.020)	(0.032)	(0.041)
Relationship status (ref = married with premarital cohabitation)			
Cohabiting	0.192***		
	(0.016)		
Married without premarital cohabitation	0.293***		
	(0.014)		
N children under age 18	-2.478***	-2.700***	-1.810***
	(0.016)	(0.022)	(0.023)
Education (ref = high)			
Middle	0.194***	0.211***	0.525***
	(0.032)	(0.052)	(0.063)
Low	-0.464***	-0.401***	-0.618***
	(0.030)	(0.048)	(0.064)
Equivalized household OECD income (by €1000)	-0.164***	-0.144***	-0.215***
	(0.006)	(0.009)	(0.012)
Labor participation (ref = full-time job)			
Part-time job	0.284***	0.311***	0.290***
	(0.027)	(0.039)	(0.047)
Unemployed	-0.396***	-0.469***	-0.422***
	(0.049)	(0.072)	(0.077)
Others	-0.455***	-0.576***	-0.321***
	(0.042)	(0.060)	(0.074)
Sibling level characteristics			
Whether sibling had a breakup (ref = no)	-1.179***		
	(0.022)		

Whether sibling had a divorce (ref = no)		-1.643***	0.162**
		(0.038)	(0.054)
Whether sibling had a separation (ref = no)		-0.020	-1.199***
		(0.061)	(0.044)
N dyad-periods	709,924	369,342	176,396
N families	11,328	6,891	5,331

Note: Only families showing variation in the dependent variable are included, as this is a requirement for the fixed-effects model. Standard errors in parentheses. *p< .05 **p< .01 *** p< .001.

Source: Belgian national registers from the CBSS, calculations by authors.

Table 3

Discrete-Time Event History Analysis Predicting an Individual's Risk of Relationship Dissolution with Interaction Terms

	Model 4	Model 5	Model 4
	All partnership types	Marriage	Cohabitation
Sibling level characteristics			
Whether sibling had a breakup (ref = no)	-1.671***		
	(0.036)		
Whether sibling had a divorce (ref = no)		-1.975***	-0.055
		(0.062)	(0.090)
Whether sibling had a separation (ref = no)		0.010	-1.778***
		(0.102)	(0.073)
Age spacing	-0.022***	-0.017***	-0.017***
	(0.002)	(0.003)	(0.003)
Gender composition (ref = woman with male sibling)			
Man with female sibling	0.021	-0.051*	0.157***
	(0.016)	(0.024)	(0.029)
Brothers	-0.017	-0.109***	0.104**
	(0.020)	(0.029)	(0.033)
Sisters	0.007	0.116***	-0.175***
	(0.019)	(0.028)	(0.034)
Interaction terms			
Sibling breakup x age spacing	0.090***		
	(0.005)		
Sibling breakup x man with female sibling	-0.013		
	(0.037)		
Sibling breakup x brothers	-0.044		
	(0.038)		
Sibling breakup x sisters	0.026		
	(0.036)		
Sibling divorce x age spacing		0.075***	0.036**
		(0.010)	(0.011)
Sibling divorce x man with female sibling		-0.063	-0.021
		(0.066)	(0.085)
Sibling divorce x brothers		-0.017	0.076
		(0.070)	(0.094)
Sibling divorce x sisters		0.113	-0.088
		(0.059)	(0.088)

Sibling separation x age spacing		-0.003	0.101***
		(0.015)	(0.010)
Sibling separation x man with female sibling		-0.081	-0.043
		(0.110)	(0.074)
Sibling separation x brothers		-0.055	-0.095
		(0.105)	(0.074)
Sibling separation x sisters		-0.026	0.013
		(0.105)	(0.078)
N dyad-periods	700,899	364,576	174,014
N families	11,290	6,863	5,315

Note: Baseline and individual level covariates modeled in Table 2 were controlled for. Only families showing variation in the dependent variable are included, as this is a requirement for the fixed-effects model. Standard errors in parentheses. * p< .05 ** p< .01 *** p< .001.

Source: Belgian national registers from the CBSS, calculations by authors.

Figure 1

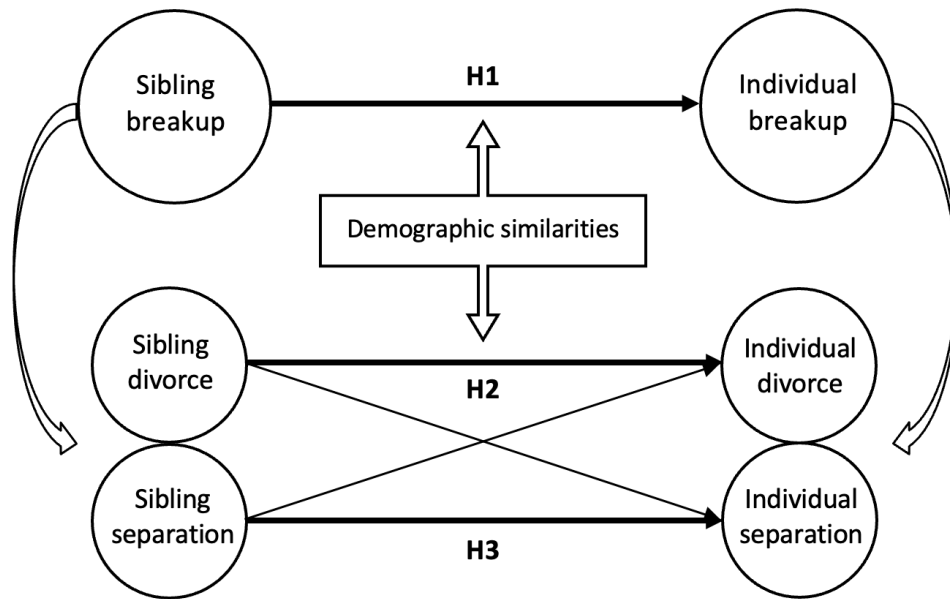*Illustration of the Expected Cross-Sibling Effects and Interactions*

Figure 2

An example of the sample selection

| | | | Observation window | | | | | |
Year	2000	2001	2002	2003	2004	2005	2006	2007
Individual A	S	S	C	C	M	M	M	D
Dummy coding			0	0	0	0	0	1
Sibling B	S	S	S	S	C	C	C	C
Dummy coding			0	0	0	0	0	0
~~*Sibling C*~~	~~D~~	~~D~~	~~D~~	~~D~~	~~D~~	~~D~~	~~D~~	~~D~~
Dummy coding			−	−	−	−	−	−
Sibling D	M	M	M	M	M	D	D	D
Dummy coding			0	0	0	1	1	1

Note: Individual A and siblings were all 18 years old or higher. S = Single, C = Cohabiting, M = Married, D = Divorced.